

CLAIMS

1. A shielding box comprising a molded body having a box shape, the molded body comprising:

a bottom wall;

5 side walls formed to rise from the outer peripheries of the bottom wall; and
an opening described by the edges of the side walls opposite the bottom wall,
the side walls being connected to the bottom wall through elastic connectors
formed to act as plate springs with respect to the bottom wall, and at least one of the
inner surface and outer surface of the molded body being electrically conductive.

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2. A shielding box for blocking electromagnetic waves that is housed in a case and covers electronic circuits on a wiring board, the shielding box comprising a molded body having a box shape, the molded body comprising:

a bottom wall;

15 side walls formed to rise from the outer peripheries of the bottom wall; and
an opening described by the edges of the side walls opposite the bottom wall;
at least one of the inner surface and outer surface of the molded body having a
metal thin film formed by physical deposition; and the ends of the side walls at the
opening side making contact with the wiring board while a portion of the shielding box
20 being pressed by an inner wall of the case elastically deforms when securing the
shielding box and the wiring board.

3. The shielding box according to claim 1 or claim 2, having partition walls
dividing its interior into a plurality of cells, the partition walls connected to the bottom
25 wall through elastic connectors formed to act as plate springs with respect to the bottom

wall.

4. The shielding box according to claim 1, wherein the shear modulus of elasticity of the material constituting the molded body ranges from 10^5 to 10^9 Pa.

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5. The shielding box according to claim 1, wherein the elastic connectors comprise a rising portion that rises once from the bottom wall toward the opening and a horizontal portion that extends in parallel to the bottom wall, connecting the end of the rising portion opposite the bottom wall and the opposite end of the side wall or the partition

10 wall.

6. The shielding box according to claim 5, wherein when the distance of the horizontal portions of the elastic connectors is H and the height of the rising portions is V, $H \geq V$.

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7. The shielding box according to claim 1, wherein the thickness of the side walls and/or the partition walls is 1 mm or less.

8. The shielding box according to claim 1 or claim 2, wherein the surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from 10^1 to $10^{-2} \Omega/\square$.

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9. The shielding box according to claim 1, wherein the partition walls are divided into a plurality of pieces by slits.

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10. The shielding box according to claim 1, wherein the molded body is formed by molding from one sheet of material.

11. The shielding box according to claim 1, wherein the free height of the shielding
5 box is larger than a gap formed between the inner surface of the case and the wiring board facing each other, the gap being in the space surrounded by the case in which the shielding box is housed and the wiring board.

12. The shielding box according to claim 2, wherein the side walls are connected to
10 the bottom wall through elastic connectors formed to function as plate springs with respect to the bottom wall.

13. The shielding box according to claim 2, wherein the metal thin film from physical deposition is formed by using a facing target-type sputtering apparatus.
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14. The shielding box according to claim 2, wherein the surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from 10^1 to 10^{-2} Ω/\square , and the relationship between the thickness T (nm) and the surface resistance R (Ω/\square) of the metal thin film satisfies the condition $T \times R < 200$ in a range of $20 < T <$
20 200.

15. The shielding box according to claim 2, wherein the metal thin film is made from a plurality of metals.

25 16. The shielding box according to claim 2, wherein the metal thin film is a brass

thin film.

17. A shielding method of electromagnetic wave shielding comprising the steps of:
- housing the shielding box of claim 1 or claim 2 in a case having a wiring board
- 5 stored therein;
- pressing the bottom wall of the shielding box by the inner surface of the case
- opposing the wiring board so as to press the ends of the side walls and/or partition walls
- against the wiring board while elastically deforming the elastic connectors; and
- covering electronic circuits on the wiring board with the shielding box.